REMARKS

In response to the Office Action mailed June 8, 2005, Applicants respectfully request reconsideration. Claims 12-23 and 86-124 have been examined and dependent claims 169-171 have been added. No new matter has been added.

Additionally, the Applicants thank Examiner Rosenberger and Supervisor Toatley for their courtesy extended to Neil Ferraro, the Applicants' undersigned representative, and to Mohammad Farahat, Director of Research & Development, Sun Chemical Security (current assignee of the present application) during an Interview held on September 1, 2005. A summary of the substance of the Interview is presented in the below discussion.

Rejections Under 35 U.S.C. §103

Claims 12-23 and 86-124 are rejected under 35 U.S.C. §103(a) as being unpatentable over Liang (U.S. Patent No. 5,719,948) in view of Shaw (U.S. Patent No. 3,663,813), Falls (U.S. Patent No. 4,567,370), Stenzel et al. (U.S. Patent No. 4,146,792) and now Suzuki (U.S. Patent No. 4,202,491). New dependent claims 169-171 have been added. Reconsideration of the rejected claims is respectfully requested.

A. Lack of Motivation

In the Office Action, the Examiner concedes that the prior amendment, Declaration of Mohammad Farahat and Response overcame the prior rejection because the resulting prior combination would not teach exciting an IR material with IR light excitation to produce IR emission. As such, now the Office Action relies on Suzuki as teaching the use of fluorescent materials that are both excited by and fluoresce in the infrared. The Examiner states that Suzuki recognizes that this type of material is effective for forgery prevention and that it is advantageous to use a small and long-lasting infrared light-emitting diode and thus concludes that one of skill in the art would have found it obvious to use such known materials for the marks of Liang.

In stating the conclusion of obviousness, the Examiner appears to rely on Suzuki's statement that the use of IR emitting material is very effective at preventing

forgery and quotes Suzuki at Column 2, lines 44-47. In the full paragraph, however, Suzuki states,

> "Since the infrared-infrared fluorescent material itself is substantially white and infrared rays cannot be sensed with the eye, the data card in which the data are recorded with such fluorescent material is very effective for the preservation of secrecy and the prevention of forgery when, by way of example, the data are registered on a white blank form with the fluorescent material." Suzuki at Column 2, lines 42-48.

Thus, in context, this statement refers to the fact that it is the IR material *being invisible to the naked eye* that makes it effective and not simply the use of IR materials. This invisible nature is also true for the UV material of Liang. Accordingly, it is respectfully submitted that this alleged motivation is insufficient, as the UV material of Liang is no less effective at being invisible that the IR material of Suzuki and a mere substitution of one known material for another known material is insufficient to establish a *prima facie* case of obviousness. Rather, there must be some advantage to do so.

The Examiner also relies on Suzuki stating that "an infrared light emitting diode of small size and long life can be used as an exciting source" and again concludes that this provides some advantage and that substituting the UV material of Liang with the IR material of Suzuki would bring this alleged advantage to the system of Liang and thus one of skill in the art would have found it obvious to use the IR material in Liang. Again, as discussed during the Interview, the Examiner's conclusion presumes that Liang's methodology is somehow deficient. Applicants' respectfully assert that such a conclusion is improper. In this regard, Liang's system and the components forming the detection system are perfectly suitable for its intended purpose, but simply uses a different methodology and related components to accomplish the goal.

It is respectfully submitted that one of skill would not have been motivated to modify the Liang system with the Suzuki components merely to replace the Liang system with another *kind* of detection system, absent some advantage to do so. A mere conclusion that one type of detection would be somehow better than another is not enough. The fact that the references may be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.

Here, it is respectfully submitted that the Office Action fails to articulate the desirability of substituting one type of detection methodology with another, and thus fails to set forth a *prima facie* case of obviousness such that the rejection should be withdrawn.

B. Proposed Modification Does Not Render The Claimed Invention Obvious

Without acceding to the propriety of the combination, as discussed during the Interview, the Applicants have amended the claims, such that, even if the references are combined in the manner suggested, the resulting combination would not render the claimed invention obvious.

As indicated in the attached Declaration of Mohammad Farahat, and as discussed during the Interview, Suzuki is directed to a data card having data recorded with an infrared fluorescent material. Suzuki also discloses a reader whereby infrared rays 7 are introduced into a detector 9 by a glass fiber 8. A filter 10 is placed in front of the detector such that "only light *favorable* for the wavelength characteristics of the detector is guided to the detector 9." Suzuki also notes that the "filter 10 *and detector 9* are appropriately selected in *dependence* on the kind of infrared-infrared fluorescent material." (See col. 6, lines 18-27, emphasis added.) Thus, as noted in the Declaration, the chosen Suzuki fluorescent material is limited to the specific detector employed in the reader. That is, only those wavelengths that are optimum for the reader are utilized. Simply, the Suzuki reader does not and cannot read ***all*** of the wavelengths in the IR range for a given fluorescent material. Rather, it can only read a favorable and select few.

On the other hand, as now claimed, the device of the present invention includes a snapshot mode detector that can detect "*any* IR light emission, with said any IR light emission including light emission having a first predetermined emission intensity at a first predetermined emission wavelength", and with the first predetermined emission intensity comprising any intensity "selected from a range of intensities between and including relatively high and low emission intensities" and with the first predetermined emission wavelength comprising any wavelength "selected from a range of wavelengths between and including peak and non-peak emission wavelengths". Thus, the detector of the present invention is not limited to a specific subset of wavelengths within the IR range, as would be the case with a modified Liang/Suzuki device. Rather, the device of

the present invention can detect any of the light emissions within the IR range. As noted in the Declaration, one advantage is that the detector can even read faint fluorescent emissions at any wavelength, thereby rendering the device of the present invention more versatile – the device is simply not limited to a specific subset of wavelengths and further is not limited to detecting only the brightest of emissions, as would be the case with a modified Liang/Suzuki device.

As noted in the Declaration and as discussed during the Interview, the conventional wisdom in the security art is to detect peak emissions. The prior art does not suggests the desire to be able to detect any light emission, including those that are non-peak emissions. Thus, it is respectfully submitted that the claimed invention is allowable over the prior art at least because the claim now requires that *any* IR light emission, as noted above, can be detectable.

Additional claim amendments have been made to specify that, while the light emission from the light-sensitive compound emits at a predetermined intensity at a predetermined wavelength, those intensities and wavelengths may be of any intensity and wavelength within the IR range. As discussed during the Interview, the prior art, whether taken alone or in any combination, discloses only a limited range within the IR spectrum and, as explicitly stated in Suzuki, that range is limited range to that which is favorable to the detector.

During the Interview, Examiner Rosenberger and Supervisor Toatley expressed a concern that because the prior art taught detecting at a specific wavelength in the IR range, that a claim directed to detecting any wavelength in the IR range would have been obvious, based on the genus/species qualification typically attributed to chemical inventions. Applicants respectfully disagree in the applicability of such a restriction in the present case because the present claims are not directed to the material alone that emits at any wavelength in the IR range, but rather to a device having the capability of detecting any wavelength in the IR range. On the other hand, the modified Liang/Suzuki device would only have the capability of detecting only a small subset of the range. The policy is that one should not be allowed a patent to a composition or material that was already in the prior art. However, the present claim would not take anything away from the public, as the proposed modification to the prior art would not provide the ability to

detect *any* wavelength in the entire IR range. Rather, the proposed modification to the prior art would only teach the capability of detecting a very distinct subset in the IR spectrum.

C. Conclusion

Accordingly, it is respectfully submitted that the rejection of the claims under 35 U.S.C. §103(a) as being unpatentable over Liang in view of Shaw, Falls, Stenzel et al. and now Suzuki be withdrawn.

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' attorney at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

McInerney et al., Applicants

Neil P. Ferraro, Reg. No. 39,188
WOLF, GREENFIELD & SACKS, P.C.
600 Atlantic Avenue
Boston, MA 02210
(617) 720-3500

Date: September __, 2005
9/8/05